

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A method for dynamically altering a portion of a digital video image based upon a user profile, the method comprising the steps of:

receiving a digital video image;

retrieving a first profile associated with a first user, the first profile including parental consent information and time of day information relating to the first user; and

digitally altering a portion of the digital video image with a replacement digital image based upon the time of day information to produce a dynamically altered video image.

2. (Original) A method for dynamically altering a portion of a digital video image in accordance with claim 1, the method further comprising the step of transmitting the altered video image.

3. (Original) A method for dynamically altering a portion of a digital video image in accordance with claim 1, wherein the first profile comprises information pertaining to a user receiving the altered video image.

4. (Original) A method for dynamically altering a portion of a digital video image in accordance with claim 1, wherein the first profile comprises demographic information.

5. (Cancelled)

6. (Original) A method for dynamically altering a portion of a digital video image in accordance with claim 1, wherein the first profile comprises advertising information.

7. (Original) A method for dynamically altering a portion of a digital video image in accordance with claim 1, wherein the first profile comprises geographic information.

8. (Cancelled)

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9. (Currently amended) A method for dynamically altering a digital video image, the method comprising the steps of:

marking an original element in a digital video image, the original element comprising a portion of the digital video image;

retrieving a first profile associated with a first user, the first profile including time of day information relating to the first user;

choosing a replacement image based at least in part upon the first profile and a parental rating code; and

altering the digital video image by replacing the original element with the replacement image to produce a dynamically altered video image.

10. (Original) A method for dynamically altering a digital video image in accordance with claim 9, wherein the step of choosing a replacement image comprises choosing a replacement image based upon the first profile.

11. (Original) A method for dynamically altering a digital video image in accordance with claim 9, wherein the step of choosing a replacement image comprises choosing a replacement image based upon demographic information.

12. (Cancelled)

13. (Cancelled)

14. (Original) A method for dynamically altering a digital video image in accordance with claim 9, wherein the step of choosing a replacement image comprises choosing a replacement image based upon advertising information.

15. (Original) A method for dynamically altering a digital video image in accordance with claim 9, wherein the step of choosing a replacement image comprises choosing a replacement image based upon geographic information.

16. (Currently amended) A method for providing targeted product placement in a digital video stream, the method comprising the steps of:

receiving a digital video stream that includes an original element, the original element comprising a portion of the digital video stream;

determining, based at least in part upon parental consent information and a first profile associated with a first user and including time of day information relating to the first user, a replacement image that should be inserted into the digital video stream;

retrieving the replacement image;

replacing the original element with the replacement image to form a modified video stream; and

transmitting the modified video stream over a broadband network.

17. (Original) A method for providing targeted product placement in a video stream in accordance with claim 16, wherein the step of determining a replacement image that should be inserted comprises the step of determining the product image that should be inserted based at least in part upon demographic information.

18. (Cancelled)

19. (Original) A method for providing targeted product placement in a video stream in accordance with claim 16, wherein the step of determining a replacement image that should be inserted comprises the step of determining the product image that should be inserted based at least in part upon advertising information.

20. (Original) A method for providing targeted product placement in a video stream in accordance with claim 16, wherein the step of determining a replacement image that should be inserted comprises the step of determining the product image that should be inserted based at least in part upon geographic information.

21. (Cancelled)

22. (Currently amended) A method for providing targeted product placement in a video stream in accordance with claim 16, wherein the original element is defined by fiducials comprising gray hemispheres located in the digital video stream.

23. (Cancelled)

24. (Currently amended) A service node for processing a digital video stream, the service node comprising:

an input port effective in receiving a digital video stream including an original element;

a control port for accessing a customer database and an image database, wherein the customer database comprises parental consent information;

a video processor including a digital signal processor (DSP), memory, and a control processor, the control processor being effective in determining the product images to be inserted based at least in part upon a customer profile retrieved from the customer database and including time of day information relating to the customer profile, the control processor also effective in retrieving replacement images from the image database, the DSP effective in calculating transforms and selectively overwriting the original element, the DSP also effective in storing the replacement images in the memory, the DSP being effective in replacing the original elements with the replacement images to form a modified video stream; and

an output port effective in transmitting the modified video stream.

25. (Original) A service node for processing a digital video stream in accordance with claim 24, wherein the memory is a frame buffer.
26. (Original) A service node for processing a digital video stream in accordance with claim 24, further comprising a main processor effective in controlling the operation of the video processor.
27. (Original) A service node for processing a digital video stream in accordance with claim 24, wherein the customer database comprises demographic information.
28. (Cancelled)
29. (Original) A service node for processing a digital video stream in accordance with claim 24, wherein the customer database comprises advertising information.
30. (Original) A service node for processing a digital video stream in accordance with claim 24, wherein the customer database comprises geographic information.
31. (Cancelled)

32. (Currently amended) A broadband network for processing video streams, the broadband network comprising:

a multicast router effective in receiving a digital video stream;

a service node comprising:

an input port effective in receiving the digital video stream;

a control port for accessing a customer database and an image database, wherein the customer database comprises parental consent information;

a video processor including a digital signal processor, memory, and a control processor, the control processor being effective in determining the product images to be inserted based at least in part upon a customer profile retrieved from the customer database, the customer profile including time of day information, the control processor effective in retrieving replacement images from the image database and storing the replacement images in the memory, the digital signal processor being effective in replacing the original elements with the replacement images to form a modified video stream; and

an output port effective in transmitting the modified video stream over a broadband network; and

a broadband access network effective in transporting the altered video stream.

33. (Original) A broadband network for processing video streams in accordance with claim 32, wherein the memory is a frame buffer.

34. (Original) A broadband network for processing video streams in accordance with claim 32, further comprising a main processor effective in controlling the operation of the video processor.

35. (Original) A broadband network for processing video streams in accordance with claim 32, wherein the customer database comprises demographic information.

36. (Cancelled)

37. (Original) A broadband network for processing video streams in accordance with claim 32, wherein the customer database comprises advertising information.

38. (Original) A broadband network for processing video streams in accordance with claim 32, wherein the customer database comprises geographic information.

39. (Cancelled)

40. (Currently amended) A subscriber terminal for receiving a digital video stream, the subscriber terminal comprising:

a port for receiving a digital video stream and subscriber data, the subscriber data including replacement images based at least in part upon a customer profile including time of day information and parental consent information; and

a video processor comprising:

an input port effective in receiving a digital video stream;

a video processor including a digital signal processor, and memory, the digital signal processor being effective in replacing the original elements with the replacement images to form a modified video signal; and

an output port effective in transmitting the modified video signal.

41. (Original) A subscriber terminal for receiving a digital video stream in accordance with claim 40, wherein the memory is a frame buffer.

42. (Original) A subscriber terminal for receiving a digital video stream in accordance with claim 40, further comprising a main processor effective in controlling the operation of the video processor.

43. (Original) A subscriber terminal for receiving a digital video stream in accordance with claim 40, wherein the customer database comprises demographic information.

44. (Cancelled)

45. (Original) A subscriber terminal for receiving a digital video stream in accordance with claim 40, wherein the customer database comprises advertising information.

46. (Original) A subscriber terminal for receiving a digital video stream in accordance with claim 40, wherein the customer database comprises geographic information.

47. (Cancelled)

48. (Currently amended) A method for providing a user-tailored video service to a subscriber, the method comprising:

- obtaining user information pertaining to a plurality of users;
- storing the user information for each of the plurality of users in a customer database;
- receiving a video stream, the video stream including an original element comprising a portion of the video stream;
- retrieving user information associated with a first user, the user information including parental consent information and time of day information relating to the first user;
- determining a replacement image to be inserted into the video stream based at least in part upon the user information;
- retrieving the replacement image;
- replacing the original element with the replacement image to form a modified video stream; and
- transporting to modified video stream to the first user over a broadband network.